



Examiner: Bradley L. Sisson

CLAIMS AMENDMENTS

Claims 1-20 (canceled)

Claim 21 (new): A method of analysis comprising the steps of:

- (a) exposing a first sample to a means that makes it radioactive;
- (b) contacting the radioactive first sample with an array; and,
- (c) detecting radiation at different spots on said array whereby the relative abundant of molecules captured at said different spots on said array can be determined.

Claim 22 (new): The method of analysis of claim 21 wherein said means that makes said first sample radioactive comprises a neutron source.

Claim 23 (new) The method of analysis of claim 21 wherein said means that makes said first sample radioactive is tritium exchange.

Claim 24 (new) The method of analysis of claim 21 further comprising a step of:
comparing the detecting data for radiation from said array to a detecting data from another array.

Claim 25 (new): The method of analysis of claim 21 further comprising a step of:

comparing the detected amount of radiation at one spot within said array to the detected amount of radiation at another spot within said array.

Claim 26 (new): The method of analysis of claim 21 further comprising a step of:

focusing radiation from said array using a magnetic field

Claim 27 (new): The method of analysis of claim 21 further comprising a step of:

adding a known amount of a molecule to said radioactive first sample prior to contacting with said array.

Claim 28 (new): The method of analysis of claim 27 further comprising a step of:

quantifying the effect of said known amount of said molecule.

Claim 29 (new): A method of analysis comprising the steps of:

- (a) exposing a first sample to a means that makes it radioactive;
- (b) mixing a second sample with the radioactive first sample into a mixture with a definite proportion of said radioactive first sample to said second sample;
- (c) contacting said mixture with an array; and,
- (d) detecting radiation from said array.

Claim 30 (new): The method of analysis of claim 29 wherein said means that makes said first sample radioactive comprises a neutron source.

Claim 31 (new) The method of analysis of claim 29 wherein said means that makes said first sample radioactive is tritium exchange.

Claim 32 (new): The method of analysis of claim 29 further comprising a step of:

comparing the detecting data of radiation from said array to a detecting data from another array.

Claim 33 (new): The method of analysis of claim 29 further comprising a step of:

comparing the detected amount of radiation at a spot on said array to the detected amount of radiation at another spot on said array.

Claim 34 (new): The method of analysis of claim 29 further comprising a step of:

enhancing the resolution of radiation detected from said array by using a magnetic field to focus said radiation.

Claim 35 (new): A method of analysis comprising the steps of:

(a) exposing a first sample to a means that makes it radioactive;

- (b) mixing a portion of a second sample with a portion of the radioactive first sample into a first mixture at a first definite proportion of said radioactive first sample to said second sample;
- (c) mixing another portion of said second sample with another portion of said radioactive first sample into a second mixture at a second definite proportion of said radioactive first sample to said second sample;
- (d) contacting said first mixture with a first array;
- (e) contacting said second mixture with a second array;
- (f) detecting radiation from said first array;
- (g) detecting radiation from said second array; and,
- (h) combining the detected data from both arrays for analysis.

Claim 36 (new): The method of analysis of claim 35 wherein said means that makes said first sample radioactive comprises a neutron source.

Claim 37 (new) The method of analysis of claim 35 wherein said means that makes said first sample radioactive is tritium exchange.

Claim 38 (new): The method of claim 35 further comprising a step of:

identifying at least one spot on said first or second array where the relative ratio of captured molecules between said first sample and said second sample is deviated.

Claim 39 (new): The method of claim 35 further comprising a step of:

combining radiation detected from said first array with radiation detected from said second array to interpret the relative abundant of captured molecules between said first sample and said second sample.

Claim 40 (new): The method of analysis of claim 35 wherein all samples are biological samples.

Claim 41 (new): The method of claim 35 wherein a magnetic field is used to improve the resolution of radiation detected from:

- (a) said first array; and,
- (b) said second array.

Claim 42 (new): A method of analysis comprising the steps of:

- (a) exposing a first sample to a source of neutrons whereby atoms within said first sample become heavy isotopes over time;
- (b) determining the ratio of heavy isotopes to regular isotopes in the post-neutron exposed first sample;
- (c) mixing a second sample with said post-neutron exposed first sample into a mixture;
- (d) separating said mixture into groups of molecules; and,

- (e) determining the ratio of heavy isotopes to regular isotopes in each group of molecules;

Claim 43 (new): The method of analysis of claim 42 wherein all samples are biological samples.

Claim 44 (new): The method of analysis of claim 42 further comprising a step of:
identifying a group of molecules with at least one differentially abundant component.

Claim 45 (new): The method of claim 44 further comprising a step of:
identifying said differentially abundant component.